Condition Assessment Surveys (CAS)





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This Presentation Will Demonstrate

- Overview of the CAS Program at LLNL
- How CAS is accomplished at LLNL
- How CAS Deficiency Data is used
- Resources that support the CAS Program
- ➤ Benefits of the CAS Program at LLNL
- Improving the LLNL CAS Program

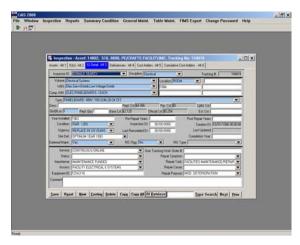
Overview



- CAS is a standardized deficiency identification process used for the evaluation of facilities and infrastructure assets
- Deficiency is defined as an item that has exceeded its service life and are verified by inspection that they can no longer be considered reliable or function as designed
- CAS Program was developed to comply with DOE Order 430.1B (Real Property Asset Management)
 - Each site must perform a condition assessment on all real property at least once during any five year period

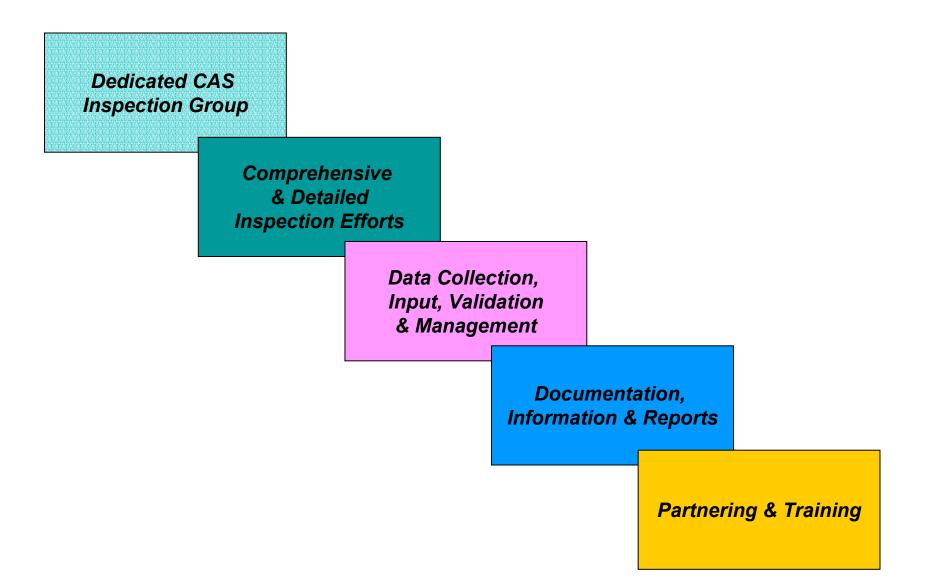
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How CAS is accomplished at LLNL





How is CAS accomplished at LLNL

- Dedicated CAS Inspection Group
 - Staff of 7 full time employees
 - Linked with Plant Engineering's computerized databases
 - Supports Maintenance Reinvestment & FIRP programs
- Comprehensive & Detailed Inspection Reports
 - Scheduled on a 3 year cycle. The site is broken into 3 equal parts
 - Discipline based survey efforts
 - Non-invasive inspection methods
 - Component life cycles are used
- Data Collection, Input, Validation & Management
 - All deficiencies are managed through the LLNL CAS office
 - Existing deficiencies are validated and updated
 - Created in-house inspection sheets

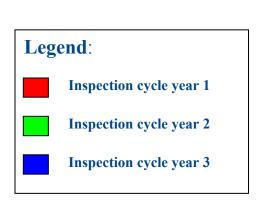


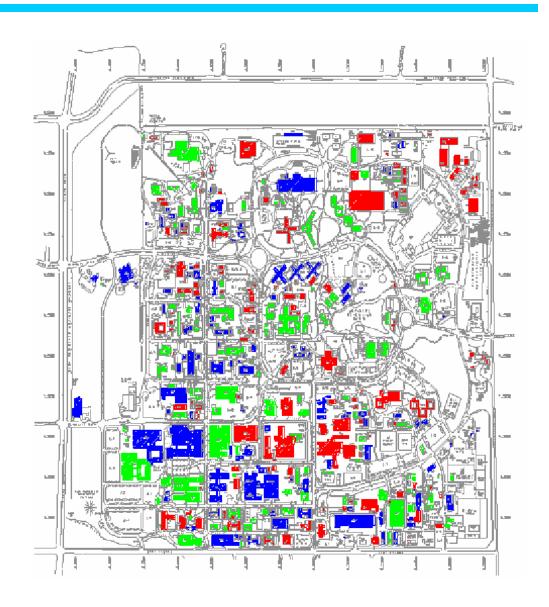
How is CAS accomplished at LLNL

- Documentation Information & Reports
 - Asset Reports
 - Current/Projected deficiency backlog
 - Asset description/WBS summary
 - Associate Director Reports
 - Backlog/Projected Backlog summaries
 - WBS summaries by Directorate
 - ADFM Pre-Ranking report
 - Maintenance Reports
 - Maintenance Area of Responsibility
 - Deferred Maintenance Backlog, Projected, Detail, or summary
 - Maintenance Pre-Ranking report
- Partnering & Training
 - Relationships with external groups & organizations
 - Utilities, Maintenance Coordinators, Shops, Program representatives, etc...



LLNL Inspection Cycles





Resources supporting LLNL CAS



- CAIS cost starts with RS Means Facilities Construction Data
 - Cost represents US national averages
 - Geographic adders
 - Updated annually
- Cost adders can be assigned to individual assets
 - Cost for work in and around Nuclear facilities
 - Security and/or Safety requirements
- ▶ 98% of LLNL Deficiency Costs are CAIS system generated



Benefits of the CAS Program at LLNL

Beyond Compliance – Performing Condition Assessment Surveys

- Keys for Assessment Based Maintenance Management
 - Reliable projected equipment survivor/failure rates
 - Consistently identifying/extending equipment design life
 - Significant life cycle cost savings/avoidance
 - Initiates Cradle to Grave Facilities & Maintenance Management
- Integral for Facility Asset-wide Management
 - CAS produces valuable data supporting management decisions
 - Availability = both Reliability and Maintainability
 - Decrease "Risks"
 - CAS provides flexibility to plan projects which helps to minimize mission downtime

CAS Inspections have an attractive "Bang for Buck" factor



Improving LLNL's CAS Program

- > CAS Inspection group has grown
 - Master Equipment List Inventory Control
 - Asbestos and Lead Database Management
 - Serves as a resource to the Electrical Authority Having Jurisdiction (AHJ) program
 - Infrared scanning of electrical equipment



What's Next?

- Expanding the Infrared scanning effort to mechanical/civil/architectural discipline CAS inspections
- Incorporating CAS inspection data into LLNL's Geographical Information System providing real-time data to our users/customers

